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(54) Title: ACTUATING MECHANISM

(57) Abstract: An actuating mechanism for use in a tool such as a plug used in oil and gas wells. The mechanism being operable under pressure in the well bore to set the plug in a first natural closed state for a pressure under a predetermined pressure range; a second closed state wherein the plug is locked closed regardless of the pressure; and a third open state by increasing the pressure to the predetermined pressure range and holding the pressure in the range for a predetermined time. Electronic and mechanical, dual piston, actuating mechanisms are described as is a method of controlling fluid flow in a well bore using the plug and performing a pressure test against the plug.

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